

Original
article

Cervical cytology smears in sexually transmitted infection clinics in the United Kingdom

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Objectives: To determine the current practice of smear taking in sexually transmitted infection (STI) clinics within the United Kingdom; what proportion of smears are taken within the national guidelines; whether clinics are screening women not covered by the national screening programme. To compare the abnormality rates of routine and opportunistic (that is, in addition to the screening recommendations) smears; the abnormality rates of smears taken within STI clinics with those taken within the community setting.

Methods: A questionnaire was circulated to all clinics in May 1998. Details of screening practice were requested. The clinics then prospectively collected details of patient's age, GP registration, date and result of previous smear, and current result of all smears taken between 11 May 1998 and 25 May 1998.

Results: There were 1828 smears taken in the 2 week period; 504 (27.6%) were opportunistic. Opportunistic smears had marginal significantly increased rates of low grade abnormalities but lower (but not statistically significant) high grade abnormalities than in routine smears. 231 (12.6%) of the women were not registered with a GP so would not be included in the national programme. The national rates of abnormalities were significantly higher in the STI clinics compared with the community setting.

Conclusion: The majority of smears taken within STI clinics fall within the national guidelines, and 12.6% of the women would probably not otherwise have been screened. The rates of abnormality were significantly higher in the STI clinics but smears taken opportunistically were less likely to have high grade abnormalities. There is no evidence from this study to support the practice of additional smears in the presence of an effective national cytology screening programme. (*Sex Transm Inf* 2001;77:107–110)

Keywords: cervical screening; sexually transmitted infection clinics; cytology; United Kingdom

Introduction

Sexually transmitted infection (STI) clinics around the world have frequently reported high rates of abnormal cervical cytology smears.^{1–4} These were published before the setting up of national screening programmes or were from countries that do not have such a national programme. Since 1988 the United Kingdom has had a national computerised cervical screening programme for women aged 20–65 registered with general practitioners (GPs). The aim of the programme has been to achieve population coverage of over 80% with a screening interval of 3–5 years. In order to have maximum effect on cervical cancer rates within the set budget, it is recommended that additional (opportunistic) smears are not justified in women with warts or multiple sexual partners, nor in women aged less than 20 years.⁵ Many STI clinics feel they should continue to perform opportunistic smears.^{6–8} There is good evidence that the national programme is preventing cervical cancer^{9–11} but there is no evidence that opportunistic smear taking further reduces cervical cancer rates.¹²

Many women are still not being screened within this national programme. A number of inner city areas are not achieving 80% coverage¹³ and not all women in the United Kingdom are registered with a GP. It is likely that STI clinics may see some of these women, so they may have an important role in performing cervical cytology on this group.

The aims of this study were to evaluate the current practice of smear taking in STI clinics, within the United Kingdom, to see what proportion of smears are taken within the national guidelines, and to establish if STI clinics are screening women not covered by the national screening programme. Also, to compare the abnormality rates of routine and opportunistic (that is, in addition to the screening recommendations) smears taken within the STI clinics, and to compare the abnormality rates of smears taken within STI clinics with those taken within the community setting.

Methods

Through the network of the British Co-operative Clinical Group a questionnaire was circulated to all clinics, in the United Kingdom, in May 1998. The first part asked about screening practice regarding age, screening interval, and extra smears in women with genital warts. It also asked about notification of results to the GP and what arrangements are made for follow up of abnormal smears. The second part involved results of all smears taken within the clinics between 11 May 1998 and 25 May 1998 with details of the patient's age, GP registration, date and result of previous smear. From this information the smears were categorised into: first smear—the first ever smear in a woman aged 20 years or over; routine—a scheduled 3–5 yearly smear in women aged

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Table 1 The smear taking practices of 130 clinics

Smear taking practice	Number of clinics	Percentage of clinics
Age policy:		
20–65	91	70.0
All ages	39	30.0
Interval policy:		
3–5 yearly	117	90.0
Annually	9	6.9
On all new patients	4	3.1
Smears on women with genital warts:		
Yes	46	35.4
No	84	64.6
Notification of GP with result if smear is:		
Normal	116	89.2
Abnormal	120	92.3
Abnormal and patient defaults	128	98.5

between 20 and 65; abnormal follow up—a repeat smear following a previous abnormality; opportunistic—smears in women under 20 years and all smears taken less than 3 years since a previous normal smear; no details—where lack of information precluded categorisation.

The data for all smears taken within England from 1 April 1998 to 31 March 1999 were obtained from the national published figures by the Department of Health.¹³

Results

Questionnaires were sent to 197 clinics; 136 (69%) completed the first part; six perform no cytology smears. The smear taking practice of the remaining 130 is shown in table 1. Overall, 58 (44.6%) clinics have a routine policy of performing opportunistic smears either by screening women <20 years, using an interval <3 years, or taking smears on women with genital warts. For 82 (63.1%) clinics the notification of GPs is achieved by incorporating their smear results into the National Screening Programme's computer system.

If needed, 127 (97.7%) clinics arrange colposcopy and 108 (83.1%) arrange follow up cytology. The remaining clinics ask the GP to arrange these.

Details of the smears taken were provided by 119 (60.4%) clinics; 12 performed no smears in the time period, leaving results from 107 clinics. There were 1828 smears taken in the 2 week period. The numbers of smears taken by clinics ranged from 1 to 191 (mean 17.1); the

larger numbers being performed in inner city London and the larger provincial city clinics. The age range was 15–69 years (mean 27.8); 82.2% of the smears were in women under the age of 35. The numbers within the smear categories were first 199 (10.9% of total), routine 630 (34.5%), abnormal follow up 302 (16.5%), opportunistic 504 (27.6%), and no details 193 (10.6%). Therefore, at least 1131 (61.9%) of the smears were within the national guidelines. Eighty two clinics performed at least one opportunistic smear, 46 of the 50 (92%) whose policy is to perform opportunistic smears and 36 of the 57 (63%) whose policy is not to perform such smears. The only clinics not performing any opportunistic smears were those doing less than average (17 smears or less in the time period) with a mean of 4.3 smears. However, significantly fewer clinics claiming to follow the national guidelines performed any opportunistic smears (χ^2 p = 0.0004) and the overall numbers of opportunistic smears taken in these clinics was significantly less: 177 of 822 (21.5%) versus 327 of 1006 (32.5%); χ^2 p = <0.0001.

The smear results by age are shown in table 2. There was a significant association between younger age and all abnormalities (low plus high grade); χ^2 p = <0.0001, and younger age and low grade abnormality; χ^2 p = <0.0001, but no significant association between younger age and high grade abnormality.

The smear results for category of smear are shown in table 3. Compared with women with first and routine smears, women with opportunistic smears were just significantly more likely to have low grade abnormalities (χ^2 p = 0.043). However, the rate of high grade abnormalities was actually lower in the opportunistic smears (0.8%) compared with first and routine smears (1.8%) but this was not significant (χ^2 p = 0.161). Smears were taken on 174 women under the age of 20 years. They were significantly more likely to have low grade abnormalities (χ^2 p = <0.0001) than women having first and routine smears, but there was no increase in high grade abnormalities (χ^2 p = 0.67). Both the low grade and high grade abnormality rate was significantly higher in the women with abnormal follow up smears (χ^2 p = <0.0001 and 0.004 respectively) compared with women with first and routine smears.

There were 231 (12.6%) women not registered with a GP, who would not be included in the national programme. There was a slightly higher rate of high grade abnormality (3.4% versus 2.9%) in these women compared with those registered with a GP but this was not statistically significant. They were less likely to have had a smear in the previous 6 years than women registered with a GP (χ^2 p = <0.0001).

The annual cytology figures for England from April 1998 to March 1999 are shown in table 4. The rates of abnormalities were significantly higher in the STI clinic smears compared with those taken in general practice and contraceptive clinics. The increased risk was OR 3.55 (95% CI 3.32–3.8) and OR 2.93 (95% CI 2.57–3.02) respectively for low grade

Table 2 The smear result by age

Age group	Inadequate (%)	Negative (%)	Low grade abnormality* (%)	High grade abnormality† (%)
15–19	14 (8.0)	91 (52.3)	65 (37.4)	4 (2.3)
20–24	51 (8.5)	392 (65.1)	144 (23.9)	15 (2.5)
25–29	55 (12.3)	316 (70.5)	66 (14.7)	11 (2.5)
30–34	28 (10.1)	211 (75.9)	34 (12.2)	5 (1.8)
35–39	19 (12.7)	108 (72.5)	19 (12.8)	3 (2.0)
40+	10 (5.6)	154 (87.0)	12 (6.8)	1 (0.6)
Total	177 (9.7)	1272 (69.6)	340 (18.6)	39 (2.1)

*Includes borderline changes and mild dyskaryosis.

†Includes moderate and severe dyskaryosis and worse.

Table 3 Smear results for category of smear

Smear results for category of smear	Inadequate No (%)	Negative No (%)	Low grade No (%)	High grade No (%)
First and routine	89 (10.7)	606 (73.1)	119 (14.4)	15 (1.8)
Abnormal follow up	16 (5.3)	178 (58.9)	95 (31.5)	13 (4.3)
Opportunistic	55 (10.9)	351 (69.6)	94 (18.7)	4 (0.8)

Table 4 Annual figures from the Department of Health for England from April 1998 to March 1999¹³

Source of smear	Inadequate	Negative	Low grade abnormality	High grade abnormality	Total
General practice	344 923 (9.2%)	3 129 022 (83.7%)	217 989 (5.8%)	48 663 (1.3%)	3 740 597
Contraceptive clinics	19 193 (9.7%)	161 559 (81.9%)	13 649 (6.9%)	2 992 (1.5%)	197 393
STI clinics	6 751 (10.3%)	45 773 (69.7%)	11 335 (17.3%)	1 806 (2.7%)	65 665
General practice and contraceptive clinics <20 years	10 398 (10.7%)	72 763 (74.6%)	12 663 (13.0%)	1 659 (1.7%)	97 483
General practice and contraceptive clinics <40 years	230 989 (10.5%)	1 769 928 (80.5%)	158 854 (7.2%)	39 556 (1.8%)	2 199 327

abnormalities and OR 2.53 (95% CI 2.17–2.95) and OR 2.12 (95% CI 1.75–2.57) for high grade abnormalities. These calculations do not take account of the age differences between women having smears in STI clinics compared with those in the community. The women from the STI clinics were significantly younger and this could bias the comparison. The national figures by age combine those taken in general practice and contraceptive clinics and do not give an age breakdown for STI clinics.¹³ However, comparison of the results of women under 40 years in the community with all women from STI clinics still showed a significant increased risk of abnormalities in STI clinics. The increased risk was OR 2.68 (95% CI 2.51–2.86) and OR 1.54 (95% CI 1.32–1.80) for low grade and high grade abnormalities. When comparing the abnormality rates for women under 20 years in STI clinics (within the 2 week period) and in the community, there was a significantly higher rate of low grade abnormalities (χ^2 p = <0.0001) in the STI clinics, but there was no difference in high grade abnormalities (χ^2 p = 0.54).

Discussion

Just over half of the STI clinics have a policy of following the guidelines of the national cytology screening programme, but in reality many do perform opportunistic smears. At least 62% of smears taken in the 2 week period were within the programme. This figure could be higher as some of the 10.6% with no details may have fallen within the guidelines. Also some of the smears categorised as opportunistic may have been within the guidelines as only details of the last smear were asked for. Some women having annual follow up after treatment of cervical intraepithelial neoplasia may have had a normal smear 1 year previously so will have been categorised as opportunistic, not abnormal follow up, if this information had not been included.

Of the women having smears within STI clinics, 12.6% would not be called by the screening programme and could potentially miss their smears, as indicated by the significantly longer time since their previous smear.

Younger women were more likely to have low grade abnormality but not high grade. The national figures show the highest rate of severe dyskaryosis or worse in the 25–29 age group.¹³ Our rates of high grade abnormality were in keeping with this, being greatest in 20–24 years at 3.7% and 25–29 years at 3.4%. As our group were predominantly young women, these two age bands were around the mean age, explaining why young age and high grade abnormality were not associated in this study.

Smears taken opportunistically in all ages, and in women under 20 years, were more likely to show low grade but not high grade abnormality. Most low grade lesions, especially in young women, are destined to regress¹⁴ so performing opportunistic smears is unlikely to reduce cervical cancer.

In 1998–9, overall coverage for England was 84% of all eligible women but 13 health authorities achieved less than 80% and two less than 70%.¹³ These health authorities were all in London or large provincial cities. The overall coverage has remained much the same since 1995 but analysis by age shows reducing coverage among 20–34 year old women.¹³ This is the age group that is predominantly seen at STI clinics, 82.2% of the smears were from women less than 35 years.

STI clinics contribute an important part to the national screening programme. Most (89.2%) incorporate their results into the programme by using the computerised system or by notifying GPs of results. They are well placed to contribute to reducing cervical cancer by performing smears on women not registered with GPs or who are overdue their smears. The rates of both low grade and high grade abnormalities are significantly higher in smears taken in STI clinics than those taken within general practice and contraceptive clinics. However, the rate of high grade abnormalities was lower in opportunistic compared with first and routine smears in STI clinics. There is therefore no evidence from this study to support the practice of additional smears in the presence of an effective national cytology screening programme.

Conflict of interest: None

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Members of the British Co-operative Clinical Group (BCCG)

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Contributors: JDW conceived the study, collected the data, and wrote the manuscript; WP performed the statistical analysis; the BCCG distributed the questionnaire.

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